storage cells together with digital signal processing circuitry on a single chip. Moreover, use of multi-port memories for communication between functional components on a chip has proven to be extremely fast and efficient and thus has come into relatively widespread use. These memories are generally referred to as embedded memories when included with circuits having other than a storage function on an integrated circuit chip.

Marked up paragraph starting at page 2, lines 16-32 and continuing at page 3, lines 1-4.

Nevertheless, memory sells, particularly of the dynamic type which store data capacitively, are relatively delicate devices and may be subject to damage or deterioration during manufacture or after being placed in service. When such devices are used for communication and data transfer among functional regions or components, the reliability of storage devices becomes extremely critical to the proper operation of the entire chip. Therefore, it is desirable to test storage cells at different stages of manufacture, board assembly and during system operation. This test is done periodically or at certain system operating states such as power-up of the chip in order to ascertain operability of the memory structures. It is also desirable to provide for broader testing of the various functional elements of the system operating [toether] <u>together</u>. Such tests are generally referred to as system level tests by cannot generally be performed by programmable memory BIST arrangements as will be discussed below.

Marked up paragraph at page 3, lines 5-18.

Nevertheless, system failures may be attributed to damage caused by external elements, minor manufacturing imperfections and/or aging of the materials, Damage from external elements could impact the correct functioning of an electronic system or any part thereof at any time during its useable life. However, minor manufacturing imperfections are the main cause of system failures at early stages of system operation while aging is the dominant cause of system failures at later stages of the time of the system. For high reliability and [and] availability applications such as banking and medical applications, it is essential to perform periodic testing of system modules.